

**WELCOME TO THE DEPARTMENT OF ENERGY'S Broad Agency Announcement (BAA) NO.
DE-BA26-99FT40274 FOR RESEARCH ENTITLED: "Multi-Layer Ceramic Fuel Cell Research"**

**ISSUE DATE: June 7, 1999
CLOSING DATE: June 7, 2000**

Summary

The United States Department of Energy, Federal Energy Technology Center (DOE/FETC or DOE), is competitively soliciting basic and applied research applications for a requirement entitled "Multi-Layer Ceramic Fuel Cell Research" to advance the art of high temperature solid state fuel cell design and manufacturing. FETC is seeking proposals with varying technical/scientific approaches to multi-layer ceramic fuel cells. This new and improved art will be used to manufacture better performing and lower cost fuel cell components. These components will be manufactured by the developer or others. In turn, the developer of the manufacturing process or others will assemble components into competitive fuel cell stacks and these in turn will be integrated into fuel cell power plants.

Solicitation Objectives

The objective of this solicitation is to procure applied research to advance the art of high temperature solid state fuel cell design and manufacturing by funding proposals employing multi-layer ceramic technology. The objective is to develop manufacturing processes that contribute to significantly lowering cell/stack first cost while maintaining or improving cell/stack robustness, life, reliability, availability and maintainability. The objective of this research is to improve the art of processing materials through various manufacturing steps such that the resulting product is a multi-layered component that can be used to build a fuel cell stack or tube bundle. An objective of this solicitation is to successfully test the physical integrity and electrochemical performance of single cells, single tubes, cell-tube hybrids, or any creative single cell shape that is manufactured. Building large stacks or tube bundles and integrated systems testing of the same is NOT an objective of this solicitation.

Background

One of the missions of the DOE Fossil Energy (FE) program is to foster development of commercial natural gas fueled energy conversion systems. The fuel cell has emerged as a leading technology to utilize fossil energy gas resources and in an environmentally clean and efficient manner. Advanced concepts employing multi-staged fuel cells as simple cycle systems could approach 70% fuel to electric efficiencies. Conceptual process engineering studies have shown that adding a gas turbine to recover waste heat from the fuel cell could result in 80% fuel to electric efficiencies. Preliminary logistics fuels studies indicate that efficiencies in the mid-60's might be feasible using logistic fuels.

The work discussed in the objectives above, should produce a fuel cell component that will contribute to the following general FETC Fuel Cell Program goals:

- reducing stack cost to \$100/kW,
- reducing simple cycle plant cost below \$1000/kW; but targeting \$400-\$600kW
- achieving competitive reliability, availability, and maintainability (RAM),
- achieving 40,000 hour life for stacks in civilian stationary power plant applications,
- achieving 10,000 hour life for stacks in transportation and military applications destined for operation in extreme conditions,
- capitalizing on applications ranging in size from a few kilowatts to 30 MW in a diverse markets,

- supporting a variety of programs including transportation, fuel-cell turbine (Hybrid) program, Vision 21, etc.
- providing fuel flexible systems (natural gas, bio-mass, coal gas, and logistics fuel)
- achieving scalable, modular designs to support low cost and speedy installation,
- achieving systems that produce zero emissions and lend themselves to CO₂ sequestration.

Another objective of the solicitation is to encourage collaborative development strategies for purposes of maximizing the probability that the Government investment will reach the consumer through commercial products.

Scope of Proposed Effort and Tasks

Applied research proposals are requested for employing multi-layer ceramics manufacturing processes similar to, but not limited to, those evolved in the computer board and chip making industry in the the manufacture of multi-layer ceramic fuel cell components. FETC encourages proposals to include sufficient bench scale testing to establish the physical and electrochemical properties. Development of the proposed manufacturing process is central to the need of this solicitation. Proposals should clearly show internal and external strategies for manufacturing process and component validation. Proposals that suggest testing of stacks or integrated fuel cell power plant systems are discouraged. The focus of this solicitation is manufacturing processes and not integrated plant testing.

SUPPLEMENTAL INFORMATION TO ASSIST POTENTIAL OFFERORS WHO INTEND TO RESPOND TO THIS BROAD AGENCY ANNOUNCEMENT

A Broad Agency Announcement (BAA) is a competitive solicitation under which the Department of Energy describes the research interest, either for an individual program requirement or for broadly defined areas of interest covering the full range of the requirement. This announcement is for the later, DOE invites individuals and organizations to submit proposals for basic and applied research which addresses research entitled: "Multi-Layer Ceramic Fuel Cell Research." Proposals which offer meritorious approaches to the objectives of the BAA are requested from all qualified offerors capable of satisfying the Government's needs.

Proposals received as a result of a BAA are evaluated by scientific and/or peer reviewers against evaluation criteria which are stated in the solicitation itself.

BAAs may be used to solicit proposals for basic and applied research; they may not be used to solicit proposals for demonstration projects. Proposals will not be accepted for which the purpose is demonstration.

The availability and the mechanism for obtaining a copy of the BAA is published in the Commerce Business Daily. The BAA solicitation and all amendments are published in their full text on the Internet at <http://www.fetc.doe.gov/business/solicita.html>.

Included in this package are a number of documents which are to be included with each proposal. If further information is required concerning the completion of any of the documents, please contact Crystal A. Sharp at telephone number 304-285-4442 or Internet Address csharp@fetc.doe.gov.

A. Place, Time, and Date(s) Proposals are due:

Applications submitted through the U. S. Postal Service should be sent to:

U. S. Department of Energy
Federal Energy Technology Center
Attn: Acquisition and Assistance Division
P. O. Box 880
Morgantown, WV 26507-0880

Applications delivered by overnight service companies, courier, or hand delivery must be received at:

U. S. Department of Energy
Federal Energy Technology Center
Attn: Acquisition and Assistance Division
3610 Collins Ferry Road
Morgantown, WV 26507-0880

This BAA has a **submission period of one (1) year beginning on the day it was published. Proposals may be submitted at any time after the issuance date of this BAA up to and including one year after the issue date.** The evaluation of proposals will be made three times, two during the year and one immediately after the closing date for the BAA.

All proposals must be received by 2:00 p.m., local time, on July 31, 1999 for the first evaluation cycle, and by 2:00 p.m., local time on February 28, 2000, for the second evaluation cycle, and by 2:00 p.m., local time on June 4, 2000, the last evaluation cycle.

DOE anticipates reviewing and evaluating proposals shortly after each of the three (3) closing date evaluation cycle(s); but reserves the right to review proposals at anytime during the life of the solicitation.

B. *Qualified Offerors:*

Individuals, educational institutions, large and small businesses, and all other organizations, with the exceptions noted below, may submit a proposal under this BAA.

Participation By Federally Funded Research and Development Centers (FFRDC) and Department of Energy (DOE) Management and Operations (M&O) Contractors (APR 1999)

1. Proposed Use of a DOE M&O Contractor

Proposals submitted by, or substantially relying upon the technical expertise of, FFRDCs and DOE M&O contractors are not desired, will not be evaluated, and will not be eligible for an award under this solicitation. Offerors are encouraged to maximize the use of private sector organizations in the performance of the proposed effort. However, a proposal that includes performance by an FFRDC or DOE M&O contractor(s) as a subcontractor will be evaluated and may be considered for award, provided that: (1) the proposed use of any such entities is specifically authorized by the cognizant agency for the FFRDC or DOE for DOE M&O contractors, in accordance with the procedures established for the FFRDC or the M&O contractor; (2) the work is not otherwise available from the private sector; and (3) the estimated cost of the FFRDC or M&O contractor work does not exceed 25 percent of the total estimated project cost. DOE reserves the right to fund the work through a DOE field work proposal or an interagency agreement.

2. Proposal Submission Requirements

In addition to the proposal information to be provided by the offeror as set forth in other parts of this solicitation the following requirements apply:

(a). Justification.

The offeror shall submit a letter with its proposal (Volume I) which states that to the best of its knowledge, the work requested will not place the FFRDC or the DOE M&O contractor in direct competition with the domestic private sector, and that the proposed scope of work cannot be performed by any private entity.

(b). Work Scope.

The offeror shall submit a detailed scope of work which clearly identifies that portion of the proposed effort for which the expertise and ability to perform lie

solely with the DOE M&O contractor. This detailed scope of work shall be provided as an appendix to the Volume II, Technical Proposal.

(c). Cost Information.

The offeror shall provide cost information for that portion of the proposed work scope (see 2, above) to be performed by the DOE M&O contractor. The cost information shall be furnished in the same format and level of detail as prescribed for subcontractors. The estimated cost of the effort shall be clearly identified in the Volume III, Cost Proposal.

C. Set-aside information, standard industrial classification, and qualified offerors:

Set-Aside Information: One small business award over the life of the solicitation is anticipated as a result of this set-aside for small businesses.

Standard Industrial Classification: The standard industrial classification (SIC) code for this acquisition is 8731. The small business size standard is 500 employees or less.

B. Withdrawal of proposals and unsuccessful proposals:

Proposals may be withdrawn by the offeror at any time prior to award of a contract by written notice to the Contracting Officer.

Unsuccessful proposals will be retained by the receiving office and will not be returned to unsuccessful offerors. Unsuccessful offerors will be given an opportunity for a debriefing which will describe the evaluation process and discuss the major strengths and weaknesses found in their proposal.

E. Funding Availability:

The amount of money which is available for first year funding of potential contract awards is approximately \$1,800,000.

F. Proposal Evaluation:

Each proposal will be objectively reviewed on its own merit against the evaluation criteria stated in the BAA using scientific and/or peer reviewers, some of whom may be DOE contractors. Offerors who object to review of their proposal by persons other than Government employees shall so state in Volume I of their proposal. Offerors are cautioned that DOE may be unable to give full consideration to proposals which indicate that only Government evaluation is authorized.

DOE is not obligated to award a contract to an offeror merely because the offeror's proposal was accepted by DOE for evaluation.

G. Funding of proposals:

DOE reserves the right to fund, in whole or in part (including any options that may be negotiated), any, all, or none of the proposals submitted.

H. DOE obligation for proposal preparation:

DOE is under no obligation to reimburse the offeror for any costs associated with the preparation or submission of proposals; however, bid and proposal preparation costs which are a portion of an established indirect cost rate will be paid to successful offerors to the extent that such costs have been reviewed and approved by the appropriate auditing agency.

I. Cost Sharing Definition and Requirements

Cost Participation: Considering the nature of the effort, the potential for future economic benefit, and the Energy Policy Act of 1992, 20% cost-sharing is mandatory.

1. The proposed cost share must be presented in the same level of detail as the cost to be reimbursed by the Government. Your cost proposal must show the breakout between Federal and non-Federal sources. The non-federal share may include cash, personnel, services, equipment, and other resources.

- (a) are verifiable from the contractor's records,
- (b) are necessary and reasonable for proper and efficient accomplishment of project or program objectives,
- (c) are not included as contributions for any other federally-assisted project or program,
- (d) are allowable and allocable under the applicable cost principles,
- (e) are not paid by the Federal Government under another award, except where authorized by Federal statute to be used for cost sharing or matching.

2. Detailed below is a list of project costs not allowed for cost-sharing purposes:

- (a) DOE shall not accept valuation for property sold, transferred, exchanged, or otherwise manipulated to acquire a new basis for depreciation purposes or to establish a rental value in circumstances which would amount to a transaction for the mere purpose of meeting the cost share requirements of this BAA.
- (b) Property which has been fully depreciated will not receive any cost-sharing value except to the extent that it has been in continuous use by the offeror during the entire previous year.
- (c) Existing facilities, equipment, and supplies, or previously expended research or development funds are not cost-sharing for the purposes of this BAA, except as amortized, depreciated, or expended in normal business practice.
- (d) Patents, proprietary data, or prior work will not be valued in determining the offer's cost participation.
- (e) Allowable costs which are absorbed by the offeror as its share of cost participation may not be charged directly or indirectly or may not have been charged directly or indirectly in the past to the Federal Government under other contracts, agreements, or grants. Additionally, other appropriated federal funds are not cost-sharing for the purposes of this BAA.

J. Type of Award Instrument

The Government contemplates award of a cost-reimbursement cost sharing contract resulting from this solicitation; but reserves the right to award the type of award instrument that is in the best interest of the Government.

K. Contracting Officer and Point of Contact

Randolph L. Kesling, Contracting Officer
Crystal A. Sharp, Contract Specialist -- Point of Contact

OVERALL ARRANGEMENT OF PROPOSAL

Each proposal will be submitted in the quantities specified below to the address given in the summary section, above, designated as the delivery point for proposals. Each proposal will be comprised of three separate volumes, numbered and submitted in the number of copies as follows:

Volume	Number of Copies
Volume I - Offer and Other Document	Original + 1
Volume II - Technical Proposal	Original + 6
Volume III - Cost Proposal	Original + 6

Brief, but complete, proposals are desired. The Technical Proposal shall be as brief as possible while addressing all of the technical evaluation criteria and preparation instructions. The technical proposal shall not, in any case, exceed 50 pages in length including figures and tables but excluding resumes of proposed personnel. The statement of work shall be included in an appendix to the technical proposal. The statement of work shall not exceed 10 pages and is not included in the technical proposal's 50 page limit. There is no limitation on the length of the two other volumes of the proposal.

Each volume designated above is to be packaged individually. This does not preclude packaging more than one, or all, volumes in a single overall package. Mark the volume number on the outside of the individual package.

Proposals are NOT to be submitted in three-ring or similar binders.

**VOLUME I, II, or III
PROPOSAL COVER SHEET**

The following information is to be provided and
included as the Proposal Cover sheet for Volumes I, II, and III

Proposal No. _____
(For Official Use Only)

DE-BA26-99FT40274

Volume No.: _____

Proposal Date: _____

Acceptance Period: _____

Company Name: _____
Address: _____

Telephone Number: _____

Offeror's Proposal Title: _____

Principal Investigator(s) and Administrative Point of Contact and Phone Numbers:

Parent Company: _____
Address: _____

Telephone Number: _____
Affiliate Company* or
Subcontractors:* _____
Address: _____

Telephone Number: _____
E-Mail Address: _____

* Please use additional pages if necessary.

NOTICE OF RESTRICTIONS ON DISCLOSURE AND USE OF DATA

The data contained on pages _____ of this proposal are submitted in confidence and contain trade secrets or privileged or confidential commercial and financial information. Such data may be used or disclosed only for evaluation purposes. If a Cooperative Agreement is awarded to this proposer as a result of or in connection with the submission of this application, the Government shall have the right to use or disclose data herein to the extent provided in the Cooperative Agreement. This restriction does not limit the Government's right to use or disclose data obtained without restriction from any source, including the proposer.

VOLUME I (Original and one copy)
OFFER AND OTHER DOCUMENT

Must contain the following information.

Offeror Information: (Original and one copy)

- a. A signed coversheet signed by an individual authorized to contractually obligate the offer.
- b. Name and address of the offeror.
- c. The BAA solicitation number.
- d. The date of submission of the proposal and the offer acceptance period (minimum of 180 days).
- e. The names and addresses of any other Federal, State, or local government entity who has in the past, or is currently, or expects in the future, to provide funds for the same or similar research activities of the offeror.
- f. If applicable, the offeror's objection to outside reviewers (other than DOE employees).
- g. REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS. The representations and certifications are normally included in requests for proposals at Section K. They are to be completed by Offerors and included in Volume I of the proposal. Various statutes and regulations require Federal agencies to obtain certain representations, certifications, and other statements from Offerors in connection with the award of contracts. This document is provided for that purpose. In order to simplify the process, those representations and certifications which are not required for this solicitation have been deleted. The Representations, Certifications, and Other Statements of Offerors or quoters is located at Attachment B.
- h. Certificate of Environmental Safety and Health (Not required with proposal.)

Should the Offeror be selected for further negotiations leading to contract award, the Offeror will be required to submit a completed Environmental Assessment Questionnaire. This will be a detailed, self-contained document summarizing the proposed action, its alternatives, the existing environment, anticipated impacts from the project, and any regulatory compliance necessary. DOE shall use this questionnaire to evaluate the potential impacts of the proposed project, and at the earliest possible time, whether execution of the proposed activities will require an Environmental Assessment (EA), an Environmental Impact Statement (EIS), or can be covered under a Categorical Exclusion (CX). If the environmental impacts are considered significant, the selectee, prior to award, will be required to prepare the Environmental Compliance Plan, an Environmental Monitoring Plan, and Environmental Report. Contract award will be made after the environmental material submitted by the respective contractor has been reviewed and accepted by DOE.

VOLUME II (Original and six copies)
TECHNICAL PROPOSAL

Technical Proposal:

Since the Technical Proposal will be evaluated to determine such matters as understanding of the work to be performed, technical approach, and potential for meeting the objective of the DOE, it should be specific and complete in every detail. The proposal should be practical and be prepared simply and economically, providing a straightforward, concise delineation of what it is the Offeror will do to address the DOE need.

The executive summary should include a brief consolidated discussion permitting readers to quickly comprehend your technical approach and merits of the technology. The executive summary shall not exceed two pages.

The public abstract shall contain not more than 500 words describing the proposed project, the objective, methodology, sponsoring organization(s), and time frame must be provided. Not more than two 8-1/2 by 11-inch diagrams may be included with the abstract. The abstract must provide an overview of the proposed project. This abstract may be released to the public by DOE in whole or in part at any time. It is, therefore, required that it shall not contain proprietary data or confidential business information.

In order that the Technical Proposal may be evaluated strictly on the merit of the material submitted, **no contractual cost information is to be included in the Technical Proposal**. Where estimated man-hours will provide clarity, they shall be quoted in man-hour figures only, with no indication as to the cost of these man-hours.

The Technical Proposal shall not exceed 50 pages, excluding appendices (statement of work, resumes, and additional publications). For interpretation of page guidelines, the front and back of a single sheet are counted as two pages. The proposed text shall be typed, single spaced, using Elite size (12 pitch) type (or equivalent) and printed, unreduced on size 8 1/2-inch by 11-inch paper. Illustrations shall be legible and no longer than 11-inch by 17-inch fold-outs, as appropriate for the subject matter. Each 11-inch by 17-inch fold-out is considered two pages when determining the number of pages. Pages of each volume shall be sequentially numbered with the volume and page numbers on each page. No material may be incorporated in any proposal by reference as a means to circumvent the page limitation.

The technical proposal consists of the Offeror's outline addressing the technical and management aspects of one specific technology need area.

Format and Content

In order to produce a comprehensive proposal for this BAA, the Offeror should address, at a minimum, the areas listed below. To help facilitate the review process and to insure addressing all the review criteria, the Offeror shall use the following Table of Contents.

The following Table of Contents shall be used to prepare technical proposal.

<u>TABLE OF CONTENTS</u>	<u>Page</u>
PUBLIC ABSTRACT	i
Table of Contents	ii
List of Tables	iii
List of Figures	iv
List of Acronyms	v
Executive Summary	vi
 1. TECHNICAL APPROACH, UNDERSTANDING, AND MERIT OF TECHNOLOGY	
1.1 Characterize the component and stack or bundle	1
1.2 Provide the rationale for the cell/tube	#
1.3 Explain incorporation of the manufactured component into configuration	#

1.4	Explain the uniqueness of proposed method	#
1.5	Demonstrate understanding of ceramic material needs relative to ease of manufacturing and component performance	#
1.6	Demonstrate an understanding of ceramics component testing methodologies	#
1.7	Demonstrate an understanding of manufacturing quality control requirements	#
1.8	Demonstrate an understanding of the application of cell/tube modeling	#
1.9	Discuss capability for executing a manufacturing cost evaluation or strategy for obtaining this information	#
1.10	Explain utilization of the cost evaluation during the design and manufacturing process	#
2.	PERSONNEL AND ORGANIZATIONAL QUALIFICATION EXPERIENCE	#
2.1	Discuss relevant organization experience	#
2.2	Discuss relevant experience of key personnel	#
2.3	Show ability to develop and execute an applied research plan	#
2.4	Discuss experience in designing ceramic components	#
2.5	Explain experience in manufacturing ceramic components	#
3.	BUSINESS MANAGEMENT APPROACH	#
3.1	Present organization's business management philosophy and management strategy	#
3.2	Discuss manufacturing concept utilization and alternative strategies for achieving acceptance and use of the concept	#
3.3	Discuss multi-layer ceramic fuel cell technology transfer	#
4.	FACILITIES AND EQUIPMENT	#
4.1	Facilities	#
4.2	Equipment	#
4.3	Existing Permits and Licenses	#
APPENDICES		
A.	STATEMENT OF WORK	A1
B.	RESUMES	B1
C.	ADDITIONAL PERTINENT PUBLICATIONS (if any)	C1

Technical Proposal General

This section shall describe the offeror's technical approach to accomplish the work.

The offeror shall provide a statement of work (SOW) which shall be divided into logical tasks and subtasks necessary to accomplish the project objective(s). The SOW shall include, where applicable, key go/no-go decision points (it is understood that because of the nature of the work proposed that some, though few, will not lend themselves to go/no-go decision points) which will be used to evaluate project success. These decision points may be identified as options in any resulting contract. The offeror shall identify specific success criteria which must be satisfied to demonstrate success for each key go/no-go decision point. A sample Statement of Work is included as Attachment A to this solicitation.

Describe the specific multi-layer ceramic manufacturing process proposed. Discuss relevant high temperature solid state electrochemical theory. Explain uniqueness of the approach for the proposed method of applying multi-layer ceramic technology to the challenge of manufacturing low cost high performing cell/stack, tube/bundle, or other configurations. Present the rationale for the recommended cell/tube configurations by including projected manufactured cost and reliability, availability and maintenance factors, and because of any other supporting factors the proposer wishes to suggest. Demonstrate an understanding of appropriate application of cell/tube modeling for design purpose (i.e., predictive engineering analysis of electrochemistry, flow, structures, and heat transfer). Discuss capability for executing a manufacturing cost evaluation. Demonstrate an understanding of ceramics material needs relative to ease of manufacturing and component

performance. Demonstrate an understanding of the ceramics manufacturing process proposed as well as cell component assembly (to build up a stack or bundle) requirements. Demonstrate an understanding of ceramics component testing methodologies including destructive, non-destructive and electrochemical performance testing.

FETC anticipates proposals of high technical and scientific quality that have as the primary focus, the refining and improving a multi-layered ceramic manufacturing technology so that it may be applied to manufacture of fuel cell electrochemical packages (i.e., anode electrode, electrolyte, and cathode electrolyte). FETC also anticipates proposals, which indicate competence to manage an aggressive bench scale cell package test program whether internal or externally executed. Testing should include destructive, non-destructive and electrochemical. FETC also anticipates proposals showing competence to manage the internal or external execution of manufacturing cost analysis competitive solid state fuel cell configurations. The purpose for manufacturing cost estimating is to show the competitiveness of the proposed manufacturing process as applied to a specific configuration(s). FETC also anticipates proposals showing business development competence to maximize the probability that successful technical development will result in commercial use.

A. Technical Approach, Understanding, and Merit of the Technology (Relative weight of 50%)

Characterize the component to be manufactured and the stack or bundle that could be built from the component including but not limited to the following: area per unit volume (cm^2/cm^3), grams per unit active area (grams/cm^2), material weight (kilograms/kilowatt), material volume (liters/kilowatt), purchased material cost ($\$/\text{kilowatt}$), percent estimated material waste, anode pressure drop (psi), cathode pressure drop (psi), maximum stack/bundle pressure (psia). Present the rationale for the recommended cell/tube configurations. Explain how the manufactured component, and its replicas, would be incorporated into a stack or tube bundle module assembly tube/bundle, or other configurations.

Explain uniqueness of the approach for the proposed method of applying multi-layer ceramic technology to the challenge of manufacturing low cost high performing cell/stacks. Demonstrate an understanding of ceramics material needs relative to ease of manufacturing and component performance.

Demonstrate an understanding of ceramics component testing methodologies including destructive, non-destructive and electrochemical performance testing and strategy, if necessary, for soliciting this capability. Demonstrate an understanding of manufacturing quality control requirements relative to the methods, materials, and components necessary to the manufacturing process. Demonstrate an understanding of appropriate application of cell/tube modeling for design purpose (i.e., predictive engineering analysis of electrochemistry, flow, structures, and heat transfer)

Discuss capability for executing a manufacturing cost evaluation or the strategy for soliciting this capability. Explain how the manufacturing cost evaluation will be used to guide design of components and manufacturing processes.

B. Personnel and Organizational Qualification Experience (Relative weight of 15%)

The offeror shall discuss relevant organizational experience. Discuss relevant experience of key personnel. Show ability to develop an applied research project plan and capability manage and execute it. Discuss experience in designing ceramic components. Explain experience in manufacturing in general and with ceramic components specifically.

C. Business Management Approach (Relative weight of 20%)

Present organization's business management philosophy and management strategy in these areas: personnel turnover rate, marketing competency, strategy for capturing market share, strategy for maximizing U.S. benefit or return on investment, collaboration and technology sharing strategies, technology licensing strategy, and financing

competency and strategy. Provide an estimate of how broadly the proposed manufacturing concept will be used (by market size and flexibility for use with different fuel cell configurations) and provide alternative strategies for achieving broad acceptance and use of the concept including a technology transfer strategy.

D. *Facilities and Equipment* (Relative Weight of 15%)

The offeror shall provide a discussion of the type, quality, availability, and appropriateness of the proposed facilities and equipment, including a description of any facilities and/or nonmonetary resources requested to be furnished by the Government for use by the offeror in performance of the proposed research.

VOLUME III (Original and six copies)
COST PROPOSAL

The Cost Proposal must contain the following information:

- a. A fully executed Contract Pricing Proposal FETC F 534.1-1#. The form follows on the next page of this solicitation.
- b. Supporting cost exhibits for the total project, by task, and between go/no-go decision points to include labor hours, rates, and costs; equipment and supplies lists and costs; subcontracted costs in the same level of detail; indirect costs and all other costs proposed. The same level of detail shall be provided for shared costs.

U.S. DEPARTMENT OF ENERGY
Federal Energy Technology Center

CONTRACT PRICING PROPOSAL COVER SHEET

1. SOLICITATION / CONTRACT / MODIFICATION NO.		FETC APPROVED FORM		
2. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)	3A. NAME AND TITLE OF OFFEROR'S POINT OF CONTACT		3B. TELEPHONE NO.	
	4. TYPE OF CONTRACT ACTION (Check)			
	A.	NEW CONTRACT	D.	
	B.	CHANGE ORDER	E.	
	C.		✓	F.
5. TYPE OF CONTRACT: COST SHARE	6. PROPOSED COST (A + B = C)			
	A. COST TO DOE	B. COST SHARE	C. TOTAL COST	
7. PLACE(S) AND PERIOD(S) OF PERFORMANCE				
8. List and reference the identification, quantity, and total price proposed for each contract line item. A line item cost breakdown supporting this recap is required unless otherwise specified by the Contracting Officer. (Continue on reverse, and then on plain paper, if necessary, using same headings.)				
A. LINE ITEM NO.	B. IDENTIFICATION	C. QUANTITY	D. TOTAL PRICE	E. REF.
9. PROVIDE NAME, ADDRESS, AND TELEPHONE NUMBER FOR THE FOLLOWING (If available)				
A. CONTRACT ADMINISTRATION OFFICE		B. AUDIT OFFICE		
10. WILL YOU REQUIRE THE USE OF ANY GOVERNMENT PROPERTY IN THE PERFORMANCE OF THIS WORK? (If "yes," identify)		11A. DO YOU REQUIRE GOVERNMENT CONTRACT FINANCING TO PERFORM THIS PROPOSED CONTRACT? (If "Yes," complete Item 11B)		11B. TYPE OF FINANCING (✓ one)
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> ADVANCE PAYMENTS <input type="checkbox"/> PROGRESS PAYMENTS <input type="checkbox"/> GUARANTEED LOANS
12. HAVE YOU BEEN AWARDED ANY CONTRACTS OR SUBCONTRACTS FOR THE SAME OR SIMILAR ITEMS WITHIN THE PAST 3 YEARS? (If "Yes," identify item(s), customer(s), and contract number(s))		13. IS THIS PROPOSAL CONSISTENT WITH YOUR ESTABLISHED ESTIMATING AND ACCOUNTING PRACTICES AND PROCEDURES AND FAR PART 31, COST PRINCIPLES? (If "No," explain)		
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		
14. COST ACCOUNTING STANDARDS BOARD (CASB) DATA (Public Law 91-379 as amended and FAR PART 30)				
A. WILL THIS CONTRACT ACTION BE SUBJECT TO CASB REGULATIONS? (If "No," explain in proposal)		B. HAVE YOU SUBMITTED A CASB DISCLOSURE STATEMENT (CASB DB-1 OR 2)? (If "Yes," specify in proposal the office to which submitted and if determined to be adequate)		
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		
C. HAVE YOU BEEN NOTIFIED THAT YOU ARE OR MAY BE IN NON-COMPLIANCE WITH YOUR DISCLOSURE STATEMENT OR COST ACCOUNTING STANDARDS? (If "Yes," explain in proposal)		D. IS ANY ASPECT OF THIS PROPOSAL INCONSISTENT WITH YOUR DISCLOSED PRACTICES OR APPLICABLE COST ACCOUNTING STANDARDS? (If "Yes," explain in proposal)		
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		
This proposal reflects our estimates and/or actual costs as of this date and conforms with the instructions in FAR 15.403-5(b)(1) and Table 15-2. By submitting this proposal, we grant the Contracting Officer or authorized representative(s) the right to examine, at any time before award, those records, which include books, documents, accounting procedures and practices, and other data, regardless of type and form or whether such supporting information is specifically referenced or included in the proposal as the basis for pricing, that will permit an adequate evaluation of the proposed price.				
15. NAME AND TITLE (Type)		16. NAME OF FIRM		
17. SIGNATURE			18. DATE OF SUBMISSION	

COST PROPOSAL PREPARATION INSTRUCTIONS

The cost proposal that each Offeror provides will be evaluated for the reasonableness of costs proposed. The cost proposal will be evaluated separately from the technical proposal and after the technical evaluation has been completed.

The general format for the preparation of cost proposals requires Offerors to provide the same information in two ways. The first way costs are to be proposed are by tasks. This gives DOE the ability to understand if the costs proposed are appropriate for the work which has been proposed to be done. Because tasks will be segregated, to the extent it is appropriate, into go/no go decision points it will allow DOE to identify the cost of the various segments of the work. The second way the information is to be presented is over time (by year). This allows DOE to plan for its funding commitments.

Offerors who simply provide raw numbers for elements of cost will not have provided an adequate cost proposal. The following is an example of an **inadequate cost submission**:

Labor (Including Indirect Costs)	\$ 50,000
Labor Overhead	52,500
Equipment Cost	10,000
Subcontract Cost	25,000
Other Cost	<u>80,935</u>
Total Cost	\$200,000

DOE's evaluation of the cost proposal will require that a thorough evaluation be made of the constituents of each of the elements of cost to determine their reasonableness. The following is an abbreviated example of an acceptable cost submission:

Cost Submission

Direct Labor	Rate	Task #	Task #	Subtotal	Total
Principal Investigator	\$xx.xx	x	x	xx	
Engineer	xx.xx	x	x	xx	
Technicians	xx.xx	x	x	xx	
Administrative	xx.xx	x	x	xx	
Total Labor					\$xx,xxx
Labor Overhead	(@ xxx%)	x	x	xx	\$xx,xxx
Equipment		x	x	xx	
<u>Item Description</u>					
3 Widgets (Vendor Quote)	@ \$150	x	x	xx	
1 Widget (Vendor Quote)		x	x	xx	
1 Widget (Engineering Estimate)		x	x	xx	
Total Equipment					\$xx,xxx
<u>Subcontract Costs</u>					
XYZ Company		x	x	xx	
ABC Company					
Total Subcontract Costs					\$1xx,xxx
The level of detail required for subcontracts is the same as that required for the prime contractors. A separate Standard Form 1411 and supporting detail must be submitted for each subcontractor.					
<u>Other Costs</u>					
<u>Travel</u>					
Purpose of Trip	xxx				
Destination	Anywhere, USA				
Number of Trips	#				
Duration	#				
Party Size	#				
Cost per trip	\$	x	x	xx	
Per Diem	\$	x	x	xx	
Car Rental	\$	x	x	xx	
Total Travel					\$x,xxx
<u>Services</u>					
(Description)		x	x	xx	
Total Services					\$x,xxx
<u>Communication/Shipping</u>					
Total Communication/Shipping		x	x	xx	\$ x,xxx
Total Other Direct Costs					\$ x,xxx
Subtotal		x	x	xx	\$xxx,xxx
Gen. & Admin. (@ xx%)		x	x	xx	\$ xx,xxx
Total Cost					<u>\$xxx,xxx</u>
Government Share					<u>\$xxx,xxx</u>
Cost Share					<u>\$xxx,xxx</u>

This information is to be provided for the total project, by task, and by year (12 month period, not fiscal year).

Evaluation Criteria

A. *Technical Evaluation Factors*

The following factors will be used for the evaluation of proposals submitted under this solicitation:

1. Evaluation Criteria for Technical Approach, Understanding and Merit of the Technology (50%)

Soundness of the candidate component design to be manufactured and the stack system to be built of these components. Multi-layer ceramic technology and manufacturing know how and uniqueness. Soundness of approach for executing the proposed applied research. Soundness of manufacturing cost estimating approach.

2. Evaluation Criteria for Personnel and Organizational Qualification Experience (15%)

Organizational experience in comparable endeavors. Relevant experience of key personnel. Strategy and experience in collaboration ventures with other organizations. Competency and experience in project planning and management. Competency for designing multi-layer ceramic components or otherwise fully understanding the design requirements of such a component.. Competency and experience with manufacturing in general and ceramic materials and components specifically. Competence to manage bench scale testing of fuel cell components produced. Competency to manage manufacturing cost analyses of alternative configurations. Technology transfer competency.

3. Evaluation Criteria for Business Management (Relative Weight of 20%)

Effectiveness of overall organizational management philosophy and vision, mechanisms to minimize personnel turnover, ability to manage a marketing effort, effectiveness of the marketing strategy, effectiveness of the intellectual property licensing strategy or alternative strategies to maximize the probability that the art developed will be used including a technology transfer strategy.

4. Evaluation Criteria for Facilities and Equipment (Relative Weight of 15%)

The evaluation of Facilities and Equipment will be judged by the following criteria: Quality and adequacy of existing facilities and equipment.. Possession of multi-layer ceramics equipment or sound plan for acquiring the same. Possession of or sound plan for acquiring or contracting for the necessary equipment for bench and pilot scale, destructive, non-destructive and electrochemical component testing.

B. *Cost Evaluation*

The Cost Proposal will not be numerically scored or adjectivally rated but will be analyzed to assess the offeror's understanding of the requirements, cost realism, accuracy and reasonableness, the probable cost to the Government, and extent of cost share proposed.

Selection of an offeror for award may also involve a determination as to whether the technical benefits of a proposal is worth any additional associated cost.

C. *Program Policy Factors*

Program policy factors are those factors that are not indicative of the proposer's individual merit, but are relevant and essential to the process of choosing which proposal(s) will best achieve the program objectives. The following program policy factors shall be considered by the Selection Official in the selection process.

1. It is desirable to select project(s) for award that represent novel or innovative technical approaches.
2. It may be desirable to select project(s) for award of less technical merit than other project(s), if the selection of such a group of projects represents a diversity of technologies that will best meet the needs of the program.

D. *Selection*

Selection of successful offerors is based upon the technical merit, the importance of the research to the program objectives, consideration of program policy factors, and the availability of funds.

List of Attachments

Statement of Work
Required Information for National Environmental Policy Act for (NEPA)
Representations, Certifications, and Other Statements of Offerors or Quoters
Reporting Requirements
Standard Contract Clauses

Attachment A
Attachment A1
Attachment B
Attachment C
Attachment D

SAMPLE STATEMENT OF WORK

The following Statement of Work format includes a mandatory Task 1 for Phases II and III -- Options 1 and 2, which is to provide information necessary for DOE to comply with the requirements of the National Environmental Policy Act (NEPA). Offerors shall prepare the Statement of Work in the following format:

Title of Work to Be Performed:

Insert title of work to be performed. Be concise and descriptive as possible. (e.g., "Road Transportable Analytical Laboratory Systems"). The title should correlate with the proposed effort.

A. Objectives

Include one paragraph on the overall objective(s) of the work. Include objectives for the Phase I (Justify Configuration to be Manufactured), Phase II (Develop Manufacturing Process and Test), and Phase III (Testing and Development of Business plan).

B. Scope of Work

This section should not exceed one-half page and should summarize the effort and approach to achieve the objective(s) of the work.

C. Tasks to be Performed

Tasks, concisely written, should be provided in a logical sequence and should be divided into three phases: Base Program - Phase I, Option 1 - Phase II, and Option 2 Phase III. Each phase, and task within a phase, should be numbered and titled. In addition, each phase should be independent, with a decision point at the completion of Phase I and II.

Base Program -- Phase I Justify Configuration to be Manufactured. Identify the task(s) associated with Phase 1. Select promising high temperature solid state configurations and execute comparative manufactured cost estimates assuming multi-layer ceramic technology processes.

The contractor shall not proceed to Phase II until written authorization is provided by the Contracting Officer.

Option 1 -- Phase II Develop Manufacturing Process and Test. Identify the task(s) associated with Phase II. Develop the proposed multi-layer ceramics manufacturing process and manufacture fuel cell active area components and develop non-destructive, destructive, and electrochemical test plans for the components.

All Offerors are required to include Task 1, Information Required for the National Environmental Policy Act, below, in their statement of work for the Phase II effort. This task will be deleted if it is determined that the work to be performed falls into one or more categorical exclusions.

Task 1.0 -- Information Required for the National Environmental Policy Act

The Contractor shall prepare a draft report which provides the environmental information described in Attachment A1, "Required Information For The National Environmental Policy Act (NEPA)." This information will be used by the DOE to prepare the appropriate level of NEPA documentation for the project. This draft report shall be submitted to the COR within sixty (60) days after authorization to proceed to Phase III. DOE shall review the report and advise the Contractor of the acceptability of the report or the need for additional information within thirty (30) days. The Contractor shall submit a final report within two (2) weeks of notice of acceptability of the draft report.

Until the NEPA review and approval process is completed, the Contractor shall take no action that would have an adverse impact on the environment or limit the choice of reasonable alternatives to the proposed action. The Contractor is not precluded from planning, developing preliminary designs, or performing other work necessary to support an application for Federal, State, or local permits.

The contractor shall not proceed to Phase III until written authorization is provided by the Contracting Officer.

Option 2 -- Phase III Testing and preparation of Business Development Plan . Identify the task(s) associated with Phase III. Execute or have executed non-destructive testing, destructive testing and electrochemical performance testing of the components manufactured in Phase II. In parallel with the testing, execute and update a business development plan emphasizing commercialization of the manufacturing process being evolved.

All Offerors are required to include Task 1, Information Required for the National Environmental Policy Act, below, in their statement of work for the Phase III effort. This task will be deleted if it is determined that the work to be performed falls into one or more categorical exclusions.

Task 1.0 -- Information Required for the National Environmental Policy Act

The Contractor shall prepare a draft report which provides the environmental information described in Attachment A1 "Required Information For The National Environmental Policy Act (NEPA)." This information will be used by the DOE to prepare the appropriate level of NEPA documentation for the project. This draft report shall be submitted to the COR within sixty (60) days after authorization to proceed to Phase III. DOE shall review the report and advise the Contractor of the acceptability of the report or the need for additional information within thirty (30) days. The Contractor shall submit a final report within two (2) weeks of notice of acceptability of the draft report.

Until the NEPA review and approval process is completed, the Contractor shall take no action that would have an adverse impact on the environment or limit the choice of reasonable alternatives to the proposed action. The Contractor is not precluded from planning, developing preliminary designs, or performing other work necessary to support an application for Federal, State, or local permits.

D. Deliverables

Provide a list of deliverables other than those identified in the Reporting Requirements Checklist Attachment C to this solicitation). Additional reports will include, but are not limited to: Topical Reports, Contractor Review Meeting Reports, and Technical Presentation papers.

E. Briefings and Presentations

Provide a list of project briefings including purpose, schedule, location, and number of travelers. The contractor should anticipate developing a technical paper and making presentation(s) at DOE Contractor Review Meeting(s) at the Federal Energy Technology Center.

Prepare a detailed "Kick-Off" briefing to the COR at FETC at the beginning of the program.

Provide and present technical papers at the annual FETC contractors review meeting(s).

At the end of each phase of the program, prepare a detailed briefing of the results of each Phase to the COR at FETC.

ATTACHMENT A1-- REQUIRED INFORMATION FOR THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

**STATEMENT OF WORK
INFORMATION FOR THE NATIONAL
ENVIRONMENTAL POLICY ACT (NEPA)**

The following information for the National Environmental Policy Act is provided for information purposes only. **This information is not required to be submitted with the proposal.** Successful Offerors will be required to provide this information if a categorical exclusion is not granted for the Phase III -- Option 2 work.

The following is a description of the environmental, health, and safety (EH&S) information to be provided by the Contractor to enable DOE to prepare the appropriate NEPA documentation for the proposed project. The EH&S information shall include, but is not limited to:

- 1.0 Brief, non-confidential description of the project including project objectives, project schedule, summary of test plans, map location(s), description of existing facilities, and description of facilities to be constructed for the project. If appropriate, the Contractor should provide process flow diagrams and plan and elevation views. The Contractor should provide sizes and capacities for major equipment. A discussion should be included on the quantities and types of materials to be used in the project including feedstocks, utilities, fuels, reactants, products, effluents, unrecovered materials, and solid waste.
- 2.0 Discussion regarding current environmental characteristics of the site(s) and any potential environmental impacts from the project. Information on environmental impacts should provide data in terms of minimum, maximum, and average values rather than qualitative statements, such as, "insignificant" or "minimal", which are subject to interpretation. Include discussion regarding compliance with Federal, State, and local environmental regulations. The following is a list of potential environmental impacts to be included in the discussion:

Air Quality -- Include discussion regarding potential environmental impact from seven criteria pollutants in the Clean Air Act (i.e., sulfur oxides, nitrogen oxides, carbon monoxide, volatile organic carbon, total suspended particles, sulfuric acid mist, and fluorides) and the Hazardous Air Pollutants (i.e., Air Toxins) list in the 1990 Title III amendment to the Clean Air Act. Include discussion regarding other potential air pollutants including carbon dioxide.

Water Resources -- Include discussion regarding potential environmental impact to surface and ground waters. The uses of the surface and ground waters should be included in the discussion. The discussion should include sources of water supply (e.g., public water supply or dedicated well) and any National Pollutant Discharge Elimination System (NPDES) permit(s).

Land Use -- Include discussion on the amount of land at the existing site and the amount that will be used for construction of the project. The discussion should include the current use of the land, zoning requirements, and current access to the land. A discussion should be included on the uses and zoning of surrounding property. The discussion should include any modifications needed for access to the land as a result of the project. Include discussion on impacts to visual and aesthetic values.

Waste Management -- Include discussion on solid and liquid waste management including waste characteristics, quantities, pretreatment, storage, transportation, and disposal practices. Identify any potentially hazardous waste materials.

Ecological Impacts -- Include a discussion regarding potential environmental impacts to vegetation, terrestrial wildlife, aquatic wildlife, threatened and endangered species, flood plains, and wetlands.

Socioeconomic Impacts -- Include information regarding availability of labor for the project, availability of transportation, and any potential impact on public services.

Archaeological, Cultural, and Historical Resources -- Include information regarding contacts with State Agencies to assess project impact on archaeological, cultural, and historically significant resources.

Noise -- Include a discussion on possible environmental impacts from noise generated by the project. Include a discussion on current noise levels and any possible increases in noise levels from the project. In general, the noise level is measured at the nearest point of public access. Include a discussion regarding proximity and any possible impact to noise-sensitive sites such as schools, hospitals, and nursing homes.

Occupational Safety and Health -- Include a discussion on plans to protect worker safety and health on the project (e.g., clothing, hearing protection, operating practices). If the project presents a potential safety hazard beyond the project boundaries, emergency response plans should be included in the discussion. Include information on worker safety and health protection programs and procedures, compliance with OSHA regulations, and facility design features related to mitigation of occupational impacts. Discuss hazards and mitigation measures related to construction activities and exposure to hazardous substances, heat, noise and odors.

Summary of Environmental Impacts -- Include a factual summary of potential environmental impacts.

- 3.0 A table should be prepared that identifies all Federal, State, and local permits required for the project. The table should provide information on the permitting schedule and current status of each permit. A discussion should be included on the allowable releases of solid, liquid, and air pollutants under the permit(s).
- 4.0 Provide complete addresses and phone numbers for agencies and persons contacted to collect information for EH&S aspects of the project.

REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS

TAXPAYER IDENTIFICATION. (OCT 1998)

(a) Definitions.

"Common parent," as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Taxpayer Identification Number (TIN)," as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

☐ TIN: _____

☐ TIN has been applied for.

☐ TIN is not required because:

☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

☐ Offeror is an agency or instrumentality of a foreign government;

☐ Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

☐ Sole proprietorship;

☐ Partnership;

☐ Corporate entity (not tax-exempt);

☐ Corporate entity (tax-exempt);

☐ Government entity (Federal, State, or local);

☐ Foreign government;

☐ International organization per 26 CFR 1.6049-4;

☐ Other _____

(f) Common parent.

☐ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

☐ Name and TIN of common parent:

Name _____
TIN _____

K.3 52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS. (MAR 1996)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that -

(i) The Offeror and/or any of its Principals -

(A) Are ☐ are not ☐ presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have ☐ have not ☐, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are ☐ are not ☐ presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has ☐ has not ☐, within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision.

The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

K.4 52.215-6 PLACE OF PERFORMANCE. (OCT 1997)

(a) The offeror or respondent, in the performance of any contract resulting from this solicitation, ____ intends, ____ does not intend (check applicable block) to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(b) If the offeror or respondent checks "intends" in paragraph (a) of this provision, it shall insert in the following spaces the required information:

PLACE OF PERFORMANCE
(STREET ADDRESS, CITY,
STATE, COUNTY, ZIP CODE

NAME AND ADDRESS OF OWNER
AND OPERATOR OF THE PLANT
OR FACILITY IF OTHER THAN
OFFEROR OR RESPONDENT

K.6 52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS. (OCT 1998) ALTERNATE II (JAN 1999)

(a)(1) The standard industrial classification (SIC) code for this acquisition is **8731**.

(2) The small business size standard is **500 employees or less**.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it [] is, [] is not a small business concern.

(2) (Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, as part of its offer that it (____) is, (____) is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it [] is, [] is not a women-owned small business concern.

(5) Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision. The offeror represents, as part of its offer, that—

(i) It [] is, [] is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal place of ownership, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It [] is, [] is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(5)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. [The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(c) Definitions.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

"Woman-owned small business concern," as used in this provision, means a small business concern -

(1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice. (1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small or small disadvantaged business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall -

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(2) Be subject to administrative remedies, including suspension and debarment; and

(3) Be ineligible for participation in programs conducted under the authority of the Small Business Act.

K.8 52.222-21 PROHIBITION OF SEGREGATED FACILITIES. (FEB 1999)

(a) Segregated facilities, as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

K.9 52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS. (FEB 1999)

The offeror represents that -

(a) It () has, () has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) It () has, () has not filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

K.10 52.222-25 AFFIRMATIVE ACTION COMPLIANCE. (APR 1984)

The offeror represents that -

(a) It ___ has developed and has on file, ___ has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2); or

(b) It ___ has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

K.11 52.223-1 CLEAN AIR AND WATER CERTIFICATION. (APR 1984)

The Offeror certifies that -

(a) Any facility to be used in the performance of this proposed contract is ___ is not ___ listed on the Environmental Protection Agency (EPA) List of Violating Facilities;

(b) The Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the EPA, indicating that any facility that the Offeror proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The Offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

K.12 52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING. (OCT 1996)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that -

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic

Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (*Check each block that is applicable.*)

___ (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

___ (ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

___ (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

___ (iv) The facility does not fall within Standard Industrial Classification Code (SIC) designations 20 through 39 as set forth in section 19.102 of the Federal Acquisition Regulation; or

___ (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

K.13 52.226-2 HISTORICALLY BLACK COLLEGE OR UNIVERSITY AND MINORITY INSTITUTION REPRESENTATION. (MAY 1997)

(a) Definitions. As used in this provision -

"Historically Black College or University" means an institution determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. For the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, the term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

"Minority Institution" means an institution of higher education meeting the requirements of Section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)) which, for the purpose of this provision, includes a Hispanic-serving institution of higher education as defined in Section 316(b)(1) of the Act (20 U.S.C. 1059c(b)(1)).

(b) Representation. The offeror represents that it -

___ is ___ is not a Historically Black College or University;

___ is ___ is not a Minority Institution.

K.14 952.226-73 ENERGY POLICY ACT TARGET GROUP CERTIFICATION. (SEP 1997)

(a) The offeror is:

(1) ___ An institution of higher education that meets the requirements of 34 CFR 600.4(a), and has a student enrollment that consists of at least 20 percent:

(i) Hispanic Americans, i.e., students whose origins are in Mexico, Puerto Rico, Cuba, or Central or South America, or any combination thereof, or

(ii) Native Americans, i.e., American Indians, Eskimos, Aleuts, and Native Hawaiians, or any combination thereof;

(2) ____ An institution of higher learning determined to be a Historically Black College and University by the Secretary of Education pursuant to 34 CFR 608.2; or

(3) ____ A small business concern, as defined under section 3 of the Small Business Act (15 U.S.C. 632), that is owned and controlled by individuals who are both socially and economically disadvantaged within the meaning of section 8(d) of the Small Business Act (15 U.S.C. 637(d)) or by a woman or women.

(b) By submission of an offer, the offeror agrees to provide to the Contracting Officer, upon request, evidence satisfactory to the contracting officer that the offeror is an entity from the Energy Policy Act target group identified.

K.15 52.227-15 REPRESENTATION OF LIMITED RIGHTS DATA AND RESTRICTED COMPUTER SOFTWARE. (JUN 1987)

(a) This solicitation sets forth the work to be performed if a contract award results, and the Government's known delivery requirements for data (as defined in FAR 27.401). Any resulting contract may also provide the Government the option to order additional data under the Additional Data Requirements clause at 52.227-16 of the FAR, if included in the contract. Any data delivered under the resulting contract will be subject to the Rights in Data - General clause at 52.227-14 that is to be included in this contract. Under the latter clause, a Contractor may withhold from delivery data that qualify as limited rights data or restricted computer software, and deliver form, fit, and function data in lieu thereof. The latter clause also may be used with its Alternates II and/or III to obtain delivery of limited rights data or restricted computer software, marked with limited rights or restricted rights notices, as appropriate. In addition, use of Alternate V with this latter clause provides the Government the right to inspect such data at the Contractor's facility.

(b) As an aid in determining the Government's need to include any of the aforementioned Alternates in the clause at 52.227-14, Rights in Data - General, the offeror's response to this solicitation shall, to the extent feasible, complete the representation in paragraph (b) of this provision to either state that none of the data qualify as limited rights data or restricted computer software, or identify which of the data qualifies as limited rights data or restricted computer software. Any identification of limited rights data or restricted computer software in the offeror's response is not determinative of the status of such data should a contract be awarded to the offeror.

REPRESENTATION CONCERNING DATA RIGHTS

Offeror has reviewed the requirements for the delivery of data or software and states (offeror check appropriate block) -

____ None of the data proposed for fulfilling such requirements qualifies as limited rights data or restricted computer software.

____ Data proposed for fulfilling such requirements qualify as limited rights data or restricted computer software and are identified as follows:

Note: "Limited rights data" and "Restricted computer software" are defined in the contract clause entitled "Rights In Data - General."

K.17 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION (APR 1998)

Note: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

If the offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

i. disclosure statement - cost accounting practices and certification

(a) Any contract in excess of \$500,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.

(b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the offerors proposal under this solicitation unless the offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

Caution: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:

[] (1) Certificate of Concurrent Submission of Disclosure Statement. The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows:

(i) Original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable; and

(ii) One copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: _____ Name and Address of Cognizant ACO or Federal Official Where Filed: _____

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

[] (2) Certificate of Previously Submitted Disclosure Statement. The offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: _____ Name and Address of Cognizant ACO or Federal Official Where Filed: _____

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

☐ (3) Certificate of Monetary Exemption. The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling more than \$25 million (of which at least one award exceeded \$1 million) in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

☐ (4) Certificate of Interim Exemption. The offeror hereby certifies that (i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 48 CFR 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

Caution: Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of \$25 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

II. COST ACCOUNTING STANDARDS - ELIGIBILITY FOR MODIFIED CONTRACT COVERAGE

If the offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.

* The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$25 million in awards of CAS-covered prime contracts and subcontracts, or the offeror did not receive a single CAS-covered award exceeding \$1 million. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

Caution: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$25 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of \$25 million or more.

III. ADDITIONAL COST ACCOUNTING STANDARDS APPLICABLE TO EXISTING CONTRACTS

The offeror shall indicate below whether award of the contemplated contract would, in accordance with subparagraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

☐ yes ☐ no

K.18 SIGNATURE/CERTIFICATION (MAR 1999)

By signing below, the offeror certifies, under penalty of law, that the representations and certifications are accurate, current, and complete. The offeror further certifies that it will notify the Contracting Officer of any changes to these representations and certifications. The representations and certification made by the offeror,

as contained herein, concern matters within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent representation or certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

Signature of the Officer or Employee
Responsible for the Offer

Date of Execution

Typed Name and Title of the Officer or Employee
Responsible for the Offer

Name and Address of Organization:

Solicitation Number: _____

SAMPLE REPORTING REQUIREMENTS CHECKLIST

Each contract which is awarded as a result of the BAA will contain a reporting requirements checklist. The checklist identifies reports which will be required under the contract, the frequency with which they will be required, the number of copies which will be required, and the disposition DOE will make of the reports. The following list is only an example which should be used for pricing purposes. The reporting requirements, which are to be put in individual contracts, will reflect DOE's assessment of the need for administrative and programmatic tracking of progress of work and provide information to users of the technical progress. The following is a sample checklist.

U.S. DEPARTMENT OF ENERGY
Federal Energy Technology Center

REPORTING REQUIREMENTS CHECKLIST

1. Awardee: TBD	2. Identification Number: DE-BA26-99FT40274																																								
3. Report Submission Address: <i>The requested quantity of all required report deliverables shall be submitted to the following address:</i> FETC AAD Document Control Bldg. 921 U.S. Department of Energy Federal Energy Technology Center P.O. Box 10940 Pittsburgh, PA 15236-0940																																									
4. Planning and Reporting Requirements: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;"></th> <th style="width: 10%;">Form No.</th> <th style="width: 10%;">Freq.</th> <th style="width: 10%;">Number of Copies</th> <th style="width: 45%;"></th> <th style="width: 10%;">Form No.</th> <th style="width: 10%;">Freq.</th> <th style="width: 10%;">Number of Copies</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;"> A. General Management <input checked="" type="checkbox"/> Management Plan <input checked="" type="checkbox"/> Status Report <input checked="" type="checkbox"/> Summary Report </td> <td style="vertical-align: top;">None None 1332.2</td> <td style="vertical-align: top;">O,C Q</td> <td style="vertical-align: top;">2 2</td> <td style="vertical-align: top;"> E. Technical (One paper copy and one PDF electronic file copy) G. Technical Progress Report <input type="checkbox"/> Final Report <input type="checkbox"/> Draft for Review <input type="checkbox"/> Final for Approval <input type="checkbox"/> Topical Report </td> <td style="vertical-align: top;">None None None None</td> <td style="vertical-align: top;"> F F A</td> <td style="vertical-align: top;"> 2 2 2</td> </tr> <tr> <td style="vertical-align: top;"> B. Schedule/Labor/Cost <input checked="" type="checkbox"/> Milestone Schedule/Plan <input checked="" type="checkbox"/> Labor Plan <input type="checkbox"/> Cost Plan <input checked="" type="checkbox"/> Milestone Schedule/Status Report <input checked="" type="checkbox"/> Labor Management Report <input type="checkbox"/> Cost Management Report </td> <td style="vertical-align: top;">1332.3 1332.4 1332.7 1332.3 1332.8 1332.9</td> <td style="vertical-align: top;"> O,C,Y M</td> <td style="vertical-align: top;">3 3</td> <td style="vertical-align: top;"> F. Property <input checked="" type="checkbox"/> Report of Contractor's Property Management System <input checked="" type="checkbox"/> Annual Report of Property in the Custody of Contractors <input checked="" type="checkbox"/> High Risk Property Report <input checked="" type="checkbox"/> Report of Physical Inventory of Capital Equipment <input checked="" type="checkbox"/> Report of Physical Inventory of Sensitive Items <input type="checkbox"/> Report of Termination or Completion Inventory </td> <td style="vertical-align: top;">None F 580.1-8 None None None SF 1428 or SF 120</td> <td style="vertical-align: top;">A A A A A FC</td> <td style="vertical-align: top;">1 1 1 1 1 1</td> </tr> <tr> <td style="vertical-align: top;"> C. Exception <input checked="" type="checkbox"/> Conference Record <input type="checkbox"/> Hot Line Report <input type="checkbox"/> Journal Articles/Conference Papers and Proceedings </td> <td style="vertical-align: top;">None None None</td> <td style="vertical-align: top;"> A A</td> <td style="vertical-align: top;">2 2</td> <td style="vertical-align: top;"> G. Other <input checked="" type="checkbox"/> Key Personnel Staffing Report <input checked="" type="checkbox"/> Subcontracting Report <input checked="" type="checkbox"/> Summary Subcontracting Report <input checked="" type="checkbox"/> Software <input checked="" type="checkbox"/> Other _____ </td> <td style="vertical-align: top;">None SF 294 SF 295 None</td> <td style="vertical-align: top;"> </td> <td style="vertical-align: top;"> </td> </tr> <tr> <td style="vertical-align: top;"> D. Environmental <input type="checkbox"/> Hazardous Substance Plan <input type="checkbox"/> Hazardous Waste Report <input checked="" type="checkbox"/> Environmental Compliance Plan <input checked="" type="checkbox"/> Environmental Monitoring Plan <input checked="" type="checkbox"/> Environmental Status Report </td> <td style="vertical-align: top;">None None None None None</td> <td style="vertical-align: top;"> O FC</td> <td style="vertical-align: top;">3 3</td> <td colspan="4"></td> </tr> </tbody> </table>			Form No.	Freq.	Number of Copies		Form No.	Freq.	Number of Copies	A. General Management <input checked="" type="checkbox"/> Management Plan <input checked="" type="checkbox"/> Status Report <input checked="" type="checkbox"/> Summary Report	None None 1332.2	O,C Q	2 2	E. Technical (One paper copy and one PDF electronic file copy) G. Technical Progress Report <input type="checkbox"/> Final Report <input type="checkbox"/> Draft for Review <input type="checkbox"/> Final for Approval <input type="checkbox"/> Topical Report	None None None None	 F F A	 2 2 2	B. Schedule/Labor/Cost <input checked="" type="checkbox"/> Milestone Schedule/Plan <input checked="" type="checkbox"/> Labor Plan <input type="checkbox"/> Cost Plan <input checked="" type="checkbox"/> Milestone Schedule/Status Report <input checked="" type="checkbox"/> Labor Management Report <input type="checkbox"/> Cost Management Report	1332.3 1332.4 1332.7 1332.3 1332.8 1332.9	 O,C,Y M	3 3	F. Property <input checked="" type="checkbox"/> Report of Contractor's Property Management System <input checked="" type="checkbox"/> Annual Report of Property in the Custody of Contractors <input checked="" type="checkbox"/> High Risk Property Report <input checked="" type="checkbox"/> Report of Physical Inventory of Capital Equipment <input checked="" type="checkbox"/> Report of Physical Inventory of Sensitive Items <input type="checkbox"/> Report of Termination or Completion Inventory	None F 580.1-8 None None None SF 1428 or SF 120	A A A A A FC	1 1 1 1 1 1	C. Exception <input checked="" type="checkbox"/> Conference Record <input type="checkbox"/> Hot Line Report <input type="checkbox"/> Journal Articles/Conference Papers and Proceedings	None None None	 A A	2 2	G. Other <input checked="" type="checkbox"/> Key Personnel Staffing Report <input checked="" type="checkbox"/> Subcontracting Report <input checked="" type="checkbox"/> Summary Subcontracting Report <input checked="" type="checkbox"/> Software <input checked="" type="checkbox"/> Other _____	None SF 294 SF 295 None	 	 	D. Environmental <input type="checkbox"/> Hazardous Substance Plan <input type="checkbox"/> Hazardous Waste Report <input checked="" type="checkbox"/> Environmental Compliance Plan <input checked="" type="checkbox"/> Environmental Monitoring Plan <input checked="" type="checkbox"/> Environmental Status Report	None None None None None	 O FC	3 3				
	Form No.	Freq.	Number of Copies		Form No.	Freq.	Number of Copies																																		
A. General Management <input checked="" type="checkbox"/> Management Plan <input checked="" type="checkbox"/> Status Report <input checked="" type="checkbox"/> Summary Report	None None 1332.2	O,C Q	2 2	E. Technical (One paper copy and one PDF electronic file copy) G. Technical Progress Report <input type="checkbox"/> Final Report <input type="checkbox"/> Draft for Review <input type="checkbox"/> Final for Approval <input type="checkbox"/> Topical Report	None None None None	 F F A	 2 2 2																																		
B. Schedule/Labor/Cost <input checked="" type="checkbox"/> Milestone Schedule/Plan <input checked="" type="checkbox"/> Labor Plan <input type="checkbox"/> Cost Plan <input checked="" type="checkbox"/> Milestone Schedule/Status Report <input checked="" type="checkbox"/> Labor Management Report <input type="checkbox"/> Cost Management Report	1332.3 1332.4 1332.7 1332.3 1332.8 1332.9	 O,C,Y M	3 3	F. Property <input checked="" type="checkbox"/> Report of Contractor's Property Management System <input checked="" type="checkbox"/> Annual Report of Property in the Custody of Contractors <input checked="" type="checkbox"/> High Risk Property Report <input checked="" type="checkbox"/> Report of Physical Inventory of Capital Equipment <input checked="" type="checkbox"/> Report of Physical Inventory of Sensitive Items <input type="checkbox"/> Report of Termination or Completion Inventory	None F 580.1-8 None None None SF 1428 or SF 120	A A A A A FC	1 1 1 1 1 1																																		
C. Exception <input checked="" type="checkbox"/> Conference Record <input type="checkbox"/> Hot Line Report <input type="checkbox"/> Journal Articles/Conference Papers and Proceedings	None None None	 A A	2 2	G. Other <input checked="" type="checkbox"/> Key Personnel Staffing Report <input checked="" type="checkbox"/> Subcontracting Report <input checked="" type="checkbox"/> Summary Subcontracting Report <input checked="" type="checkbox"/> Software <input checked="" type="checkbox"/> Other _____	None SF 294 SF 295 None	 	 																																		
D. Environmental <input type="checkbox"/> Hazardous Substance Plan <input type="checkbox"/> Hazardous Waste Report <input checked="" type="checkbox"/> Environmental Compliance Plan <input checked="" type="checkbox"/> Environmental Monitoring Plan <input checked="" type="checkbox"/> Environmental Status Report	None None None None None	 O FC	3 3																																						
5. Frequency Codes and Due Dates: <table style="width: 100%;"> <tr> <th style="text-align: left;">Definition</th> <th style="text-align: right;">Calendar Days Due After Event</th> <th style="text-align: left;">Definition</th> <th style="text-align: right;">Calendar Days Due After Event</th> </tr> <tr> <td>A - As Required</td> <td style="text-align: right;">*</td> <td>O - Once After Award</td> <td style="text-align: right;">30</td> </tr> <tr> <td>C - Contract Change</td> <td style="text-align: right;">15</td> <td>Q - Quarterly (End of Calendar Quarter)</td> <td style="text-align: right;">30</td> </tr> <tr> <td>FC - Final - End of Effort (No Draft)</td> <td style="text-align: right;">0</td> <td>S - Semiannual (End of Half Calendar Year)</td> <td style="text-align: right;">30</td> </tr> <tr> <td>F - Technical Report - Draft Version</td> <td style="text-align: right;">-60</td> <td>Y - Yearly (End of Calendar Year)</td> <td style="text-align: right;">30**</td> </tr> <tr> <td> Final Version</td> <td style="text-align: right;">0</td> <td></td> <td></td> </tr> <tr> <td>M - Monthly (End of 1-Month Period)</td> <td style="text-align: right;">25</td> <td></td> <td></td> </tr> </table> <p>* For due date of Hot Line Report, Property Reports, and all other reports, see attached text. ** The yearly plans, identified as required in Sections 4A and 4B, are due by September 15 for the following Federal fiscal year.</p>								Definition	Calendar Days Due After Event	Definition	Calendar Days Due After Event	A - As Required	*	O - Once After Award	30	C - Contract Change	15	Q - Quarterly (End of Calendar Quarter)	30	FC - Final - End of Effort (No Draft)	0	S - Semiannual (End of Half Calendar Year)	30	F - Technical Report - Draft Version	-60	Y - Yearly (End of Calendar Year)	30**	Final Version	0			M - Monthly (End of 1-Month Period)	25								
Definition	Calendar Days Due After Event	Definition	Calendar Days Due After Event																																						
A - As Required	*	O - Once After Award	30																																						
C - Contract Change	15	Q - Quarterly (End of Calendar Quarter)	30																																						
FC - Final - End of Effort (No Draft)	0	S - Semiannual (End of Half Calendar Year)	30																																						
F - Technical Report - Draft Version	-60	Y - Yearly (End of Calendar Year)	30**																																						
Final Version	0																																								
M - Monthly (End of 1-Month Period)	25																																								
6. Special Instructions: The forms identified in the checklist are available at http://www.fetc.doe.gov/business/forms/forms.html . Alternate formats are acceptable provided the contents remain consistent with the form. All technical reports submitted to the DOE must be accompanied by a completed and signed FETC F 2050.4 , addressing patent information.																																									

J.1 GENERAL INSTRUCTIONS FOR THE PREPARATION AND SUBMISSION OF REPORTS (MAR 1999)

The contractor shall prepare and submit (postage prepaid) the plans and reports indicated on the "Reporting Requirements Checklist" to the addressee identified on the checklist. The level of detail the contractor provides in the plans and reports shall be commensurate with the scope and complexity of the effort and shall be as delineated in the guidelines and instructions contained herein. The prime contractor shall be responsible for acquiring data from any subcontractors to ensure that data submitted are compatible with the data elements which prime contractors are required to submit to DOE.

J.2 MANAGEMENT PLAN (MAR 1999)

The Management Plan describes the contractor's approach to performing the effort and producing the products identified in the contractual agreement, and the technical, schedule, cost, and financial management control systems to be used to manage performance.

The outline for the Management Plan and a description of the contents follows:

EXECUTIVE SUMMARY

The executive summary gives DOE/FETC's management a brief, comprehensive overview of the most important aspects of the management plan.

BACKGROUND

This is a discussion of the background of the project, including the scientific, sociological, legislative, and historical factors, that demonstrates the contractor's understanding of the problems, both technical and management, associated with the project.

SCOPE OF THE PROJECT

This section gives a brief overview of the project. It should include:

general description of project objectives;
task titles and short descriptions;
participants.

WORK BREAKDOWN STRUCTURE (WBS)

The scope and complexity of the contractual agreement influence the number of levels required. Each descending level represents an increasingly detailed definition of the work elements. Level 1 is the goal or objective of the contractual agreement in its entirety. Level 2 consists of the major work products necessary for achieving the goals of the contractual agreement. Level 3 outlines the major element segments (subsystems) necessary for completing Level 2 elements. Work breakdown structure elements are identified by name and number from a progressive, alphanumeric system. For example:

Example:

WBS Level 1: The overview should describe the philosophy underlying the selected technical approach.

WBS Levels 2 and 3: _____

WBS ELEMENT X.X: _____(TITLE)

OBJECTIVE: State the objective of the task in a concise manner.

BACKGROUND (Not required for Construction Tasks):

With respect to the project objective, what is the current state of understanding?

Given the state-of-the-art, what are the outstanding issues which must be resolved in order to make progress?

TECHNICAL APPROACH (Not required for Construction Tasks): Describe in detail the manner in which the various issues will be resolved. The following are aspects of the work which should be considered and addressed (along with others you feel appropriate):

What experiments will be performed and why?

What materials will be used?

What are the experimental conditions?

What analytical techniques will be employed?

What will be the approach to modeling?

In answering these questions, you should consider how the various tasks relate to one another and to other relevant ongoing work. Task outputs which feed into other tasks (and vice-versa) should be clearly delineated.

DELIVERABLES (Not required for Construction Tasks): Describe specifically the results of the task. These should include:

raw and reduced data and method of presentation;

brief description of models to be developed;

other key results as appropriate.

SUPPORT SYSTEMS AND CONTROLS

In this section, the management, technical, and administrative system that will be used to control and execute the project will be described. Examples of the systems include: systems and engineering analysis, quality assurance, environmental, safety and health, legal support, ADP support, and accounting support.

J.3 STATUS REPORT (MAR 1999)

The Status Report is the contractor's project manager brief narrative assessment (by WBS) of the work actually performed and the overall status of the various tasks.

The Status Report provides a concise narrative assessment of the status of the work being performed under the contractual agreement. DOE management uses the report to monitor status and to provide early recognition of potential problem areas. The report highlights changes to objectives, changes to technical approach, relationship to previously planned activities, task variances from baselines in excess of stipulated thresholds by WBS reporting element, causative factors, and actions taken or proposed to resolve them, list of presentations and publications, as well as factors with potential for causing significant variances in the future. Task progress of major accomplishments for each task in bullet form may also be highlighted. The report identifies open items requiring action by DOE or the contractor. The report also provides a summary assessment of the current situation, including forecast of the near future and the expected impact on project accomplishment.

J.4 COST PLAN (DOE F 1332.7) (MAR 1999)

The Cost Plan establishes the plan for accruing total costs by WBS element for the life of the contractual agreement. The time-phased baseline establishes the basis for the measurement of actual cost accumulation and provides basic information for updating and forecasting budget requirements. The Cost Plan itemizes accrued costs by WBS element for prior fiscal years, the current fiscal year by month, and future fiscal years until completion of the contractual agreement. For projects being managed to the fourth WBS level, additional forms show cost detail for each task individually.

J.5 COST MANAGEMENT REPORT (DOE F 1332.9) (MAR 1999)

This is a periodic report that shows the cost status of the contract and is compared with the Cost Plan. Information is reported by WBS element.

J.6 HOT LINE REPORT (MAR 1999)

The "Hot Line" Report may be used to report a major breakthrough in research, development, or design; an event causing a significant schedule slippage or cost overrun; an environmental, safety and health violation; achievement of or failure to achieve an important technical objective; or any requirement for quickly documented direction or redirection. The report shall be submitted by the most rapid means available, usually electronic, and should confirm telephone conversations with DOE representatives. Identification as a "Hot Line Report" serves notice at each link in the delivery chain that expedition in handling is required. Unless otherwise agreed by the parties involved, DOE is expected to take action and respond in a similarly timely manner. The report should include:

1. Contractor's name and address;
2. Contract title and number;
3. Date;
4. Brief statement of problem or event;
5. Anticipated impacts; and
6. Corrective action taken or recommended.

Hot line reports shall document the incidents listed below:

1. Any single fatality or injuries requiring hospitalization of five or more individuals is to be immediately reported.
2. Any significant environmental permit violation is to be reported as soon as possible, but within 24 hours of the discovery of the incident.
3. Other incidents that have the potential for high visibility in the media are to be reported as quickly as possible, but within 24 hours following discovery.
4. Any failure resulting in damage to Government-owned equipment in excess of \$50,000 is to be reported as quickly as possible, but within 24 hours of the discovery of the failure.
5. Any unplanned event which is anticipated to cause a schedule slippage or cost increase significant to the project is to be reported within 24 hours.
6. Any verbal or written Notice of Violation of any Environmental, Safety, and Health statutes arising from the performance of this contract is to be immediately reported.
7. Any accidental spill or release which is in violation of any Environmental, Safety, and Health statutes arising from the performance of this contract is to be immediately reported, but within 24 hours of the discovery of the accident.

8. Any incident which causes a significant process or hazard control system failure, or is indicative of one which may lead to any of the above defined incidents, is to be reported as soon as possible, but within 5 days of discovery.

The requirement to submit Hot Line Reports for the incidents identified in 1, 2, 3, 6, or 7 is for the sole purpose of enabling DOE officials to respond to questions relating to such events from the media and other public.

When an incident is reported in accordance with 4, 5, 6, 7, or 8, the contractor shall conduct an investigation of its cause and make an assessment of the adequacy of resultant action. A written report is required no later than ten (10) calendar days following the incident and shall include an analysis of the pertinent facts regarding the cause, and a schedule of the remedial events and time periods necessary to correct the action.

When an event results in the need to issue a written or verbal statement to the local media, the statement is to be cleared first; if possible, and coordinated with FETC Management and Communications Division, the Contracting Officer Representative (COR) and the Contracting Officer.

J.7 SUBMISSION OF JOURNAL ARTICLES, CONFERENCE PAPERS AND PROCEEDINGS GENERATED BY LARGE BUSINESSES FOR DOE REVIEW (FEB 1999)

The Contractor shall submit to DOE for review and approval all documents generated by the Contractor, or any subcontractor, which communicate the results of scientific or technical work supported by DOE under this award, whether or not specifically identified in the award, prior to submission for publication, announcement, or presentation. Such documents include journal articles, conference papers and proceedings, etc. Each such document shall be accompanied by a properly completed FETC Form 2050.4, "Request for Patent Clearance for Release of Contracted Research Documents."

The Contractor shall simultaneously submit a draft version of the document to the DOE COR and the DOE Patent Counsel Office prior to the publication, presentation, or announcement. The document submitted to the DOE Patent Counsel shall be accompanied by a completed FETC Form 2050.4. The DOE COR and DOE Patent Counsel shall review the draft version of the document and notify the Contractor of approval or recommended changes. The approved final version shall be submitted to the FETC AAD Document Control Coordinator.

The following information shall be provided for conference papers and proceedings, etc.

- Name of conference
- Location of conference (city, state, and country)
- Date of conference (month/day/year)
- Conference sponsor

J.8 SUBMISSION OF JOURNAL ARTICLES, CONFERENCE PAPERS AND PROCEEDINGS GENERATED BY A SMALL BUSINESS OR NONPROFIT ORGANIZATION FOR DOE REVIEW (FEB 1999)

The Contractor shall submit to DOE for review and approval all documents generated by the Contractor, or any subcontractor, which communicate the results of scientific or technical work supported by DOE under this award, whether or not specifically identified in the award, prior to submission for publication, announcement, or presentation. Such documents include journal articles, conference papers and proceedings, etc. Each such document shall be accompanied by a properly completed FETC Form 2050.4, "Request for Patent Clearance for Release of Contracted Research Documents."

The Contractor shall submit a draft version of the document to the COR prior to the publication, presentation, or announcement. The COR shall review the draft version of the document and notify the Contractor of approval or recommended changes. The final version, along with a completed FETC Form 2050.4, shall be submitted to the FETC AAD Document Control Coordinator.

The following information shall be provided for conference papers and proceedings, etc.

- Name of conference
- Location of conference (city, state, and country)
- Date of conference (month/day/year)
- Conference sponsor

J.9 ENVIRONMENTAL (MAR 1999)

In response to the requirements of the National Environmental Policy Act of 1969 (NEPA) and other related environmental statutes, the Federal Energy Technology Center (FETC) requires the submission of various documents that assess the environmental aspects and projected impacts of all of its proposed actions. These documents may include the following: (1) Hazardous Substance Plan, (2) Hazardous Waste Report, (3) Environmental Compliance Plan, (4) Environmental Monitoring Plan, and (5) Environmental Status Reports.

The environmental information provided in these documents will enable FETC to fulfill its responsibilities under NEPA (additional information about the requirements of the National Environmental Policy Act can be found in the DOE NEPA Compliance Guide and 40 CFR 1021) and to monitor the proposer's compliance with other environmental regulations. The implementation of any task associated with a proposed action will be dependent upon DOE submitting and acquiring approval of necessary NEPA documentation. Therefore, to minimize the risk of project delays, it is imperative that these reports be submitted in a timely manner.

The information contained herein specifies the basic environmental requirements for this procurement action, but it is not to be interpreted as containing all necessary information for any given project. Likewise, certain aspects of the requirements may not be applicable. Accordingly, the level of information provided should be sufficient for DOE to assess the environmental implications of the proposed action.

J.10 HAZARDOUS SUBSTANCE PLAN (MAR 1999)

The Contractor shall submit a Hazardous Substance Plan not later than thirty (30) days after initial contract award. The Plan shall specifically identify each Hazardous Substance (as defined under 40 CFR 261, Subpart D, entitled Lists of Hazardous Wastes) anticipated to be purchased, utilized or generated in the performance of this contract. For each such Hazardous Substance identified, the Plan shall specifically provide the following information:

- Description of Substance/Chemical
- EPA Hazardous Waste Number
- EPA Hazard Code
- Anticipated Quantity to be purchased, utilized or generated
- Anticipated Hazardous Waste Transporter
- Anticipated Hazardous Waste Disposal Facility Contractor and Location (City/Municipality, State)
- Anticipated Treatment Method

J.11 HAZARDOUS WASTE REPORT (MAR 1999)

The Contractor shall submit a Hazardous Waste Report at the completion of contract performance. The Report shall specifically identify each Hazardous Waste (as defined under 40 CFR 261, Subpart D, entitled Lists of Hazardous Wastes) actually utilized, or generated in the performance of this contract. For each such Hazardous Waste identified, the Report shall specifically provide the following information:

- Description of Substance/Chemical
- EPA Hazardous Waste Number
- EPA Hazard Code
- Actual Quantity Disposed
- Actual Hazardous Waste Transporter
- Actual Hazardous Waste Disposal Facility Contractor and Location (City/Municipality, State)

Actual Disposal Date
Actual Treatment Method

The Hazardous Waste Report is intended as a final reconciliation of anticipated versus actual Hazardous Substances purchased, utilized, or generated in the performance of this contract.

J.12 TECHNICAL REPORTS (MAR 1999)

CAUTION: Technical reports SHALL NOT include limited rights data (such as restricted, proprietary or patentable information). Limited Rights Data shall be submitted in a separate proprietary appendix to the technical report. This appendix SHALL NOT be submitted in an electronic format but rather submitted in ONE ORIGINAL AND THREE (3) PAPER COPIES along with the paper version of the sanitized technical report deliverable. The appendix shall be referenced in, but not included in, the sanitized technical report deliverable under the contract. In accordance with FAR 52.227-14, Rights in Data-General, the appendix must be appropriately marked and identified.

All TECHNICAL REPORTS submitted to the DOE MUST be accompanied by a completed and signed FETC F 2050.4, addressing patent information.

J.13 FINAL TECHNICAL REPORT (MAR 1999)

The Final Report shall document and summarize all work performed during the contract period in a comprehensive manner. It shall also present findings and/or conclusions produced as a consequence of this work. This report shall not merely be a compilation of information contained in subsequent quarterly, or other technical reports, but shall present that information in an integrated fashion, and shall be augmented with findings and conclusions drawn from the research as a whole.

The contractor shall deliver a draft copy of the final report sixty (60) days before the completion of the period of performance. The Government shall be allowed thirty (30) days to review the draft copy and to notify the contractor, in writing, of approval or recommended changes. If the Government does not approve or recommend changes within thirty (30) days of receipt of the draft copy, the report shall be deemed approved. The approved final report is due on the contract completion date.

J.14 TOPICAL REPORT (MAR 1999)

These reports usually provide a comprehensive statement of the technical results of the work performed for a specific task or subtask of the Statement of Work (SOW), or detail significant new scientific or technical advances. If required, DOE shall review and approve the report outline prior to submission of the report.

J.15 GUIDELINES FOR ORGANIZATION OF TECHNICAL REPORTS (MAR 1999)

The following sections should be included (as appropriate) in technical reports in the sequence shown. Any section denoted by an asterisk is required in all technical reports.

TITLE PAGE* - The Title Page of the report itself must contain the following information in the following sequence:

- Report Title
- Type of Report (Quarterly, Semi-Annual, Annual, Topical, Final)
- Reporting Period Start Date
- Reporting Period End Date
- Principal Author(s)
- Date Report was Issued (Month [spelled out] and Year [4 digits])
- DOE Award Number (e.g., DE-AC26-99FT12345) and if appropriate, task number
- Name and Address of Submitting Organization (This section should also contain the name and address of significant contractors or subcontractors who participated in the production of the report.)

DISCLAIMER* -- The Disclaimer must follow the title page, and must contain the following paragraph:

“This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.”

ABSTRACT* - should be a brief, concise summary of the report.

TABLE OF CONTENTS*

LIST(S) OF GRAPHICAL MATERIALS

INTRODUCTION

EXECUTIVE SUMMARY - this should be a well organized summary that highlights the important accomplishments of the research during the reporting period. It should be no less than one page and no more than two pages in length, and should be single spaced. This summary must be more comprehensive than the traditional “abstract.”

EXPERIMENTAL* - this should describe, or reference all experimental methods being used for the research. It should also provide detail about materials and equipment being used. Standard methods can be referenced to the appropriate literature, where details can be obtained. Equipment should be described only if it is not standard, or if information is not available thru the literature or other reference publications.

RESULTS AND DISCUSSION* - It is extremely important that this section includes enough relevant data, especially statistical data, to allow the project manager to justify the conclusions. With the relevant data, explain how the data was interpreted and how it relates to the original purpose of the research. Be concise in the discussion on how this research effort solved or contributed to solving the original problem.

CONCLUSION* - The conclusion should not simply reiterate what was already included in the “Results and Discussion” section. It should, however, summarize what has already been presented, and include any logical implications of how the successes are relevant to technology development in the future. This is extremely important, since “relevancy” continues to be a criteria of the program.

REFERENCES*

BIBLIOGRAPHY

LIST OF ACRONYMS AND ABBREVIATIONS

APPENDICES (IF NECESSARY)

Company Names and Logos -- Except as indicated above, company names, logos, or similar material should not be incorporated into reports.

Copyrighted Material -- Copyrighted material should not be submitted as part of a report unless written authorization to use such material is received from the copyright owner and is submitted to DOE with the report.

Measurement Units -- All reports to be delivered under this instrument shall use the SI Metric System of Units as the primary units of measure. When reporting units in all reports, primary SI units shall be followed by their U.S. Customary Equivalents in parentheses ().

The contractor shall insert the text of this clause, including this paragraph, in all subcontracts under this award.

Note: SI is an abbreviation for "Le Systeme International d'Unites."

J.16 ELECTRONIC MEDIA STANDARD FOR PREPARATION OF TECHNICAL REPORTS (MAR 1999)

FILE FORMAT

Production of high-quality, electronic documents is dependent on the quality of the input that is provided. Thus, the contractor shall submit one good quality paper copy using either permanent or alkaline paper plus an electronic version of each technical report.

ELECTRONIC REPORTS SHALL BE SUBMITTED IN THE ADOBE ACROBAT PORTABLE DOCUMENT FORMAT (PDF). ELECTRONIC REPORTS SUBMITTED IN A FORMAT OTHER THAN ADOBE WILL BE RETURNED AND THE REPORT CONSIDERED DELINQUENT.

Each report shall be an integrated file that contains all text, tables, diagrams, photographs, schematics, graphs, and charts.

SUBMISSION FORMAT

The electronic file(s) shall be submitted via diskette or CD-ROM. Diskettes or CD-ROMs must be labeled as follows:

DOE Award Number
Type/Frequency of Report(s)
Reporting Period (if applicable)
Name of submitting organization
Name, phone number and fax number of preparer

Diskettes -- Diskettes must be 3.5" double-sided, high-density (1.4 M Byte capacity). If file compression software is used to transmit a PDF file spanning more than one diskette, PKZIP from PKWare, Inc., is the required compression software. State the number of diskettes in the set (e.g., 1/3)

CD-ROM -- The electronic file(s) may be submitted on an ISO9660-format CD-ROM.

FILE NAMING

In naming the electronic file, the contractor shall use the standard eight-character naming convention for the main file name, and the three character extension applicable to the software use, e.g., .pdf for Adobe.

For the main file name, the first five characters are the last five digits from the award number; e.g., for Award Number DE the first five characters are 12345.

The next character represents the technical report and will always be designated as "R".

The remaining two characters indicate the chronological number of the particular type of report; e.g., Quarterly Technical Progress Reports for a 5-year award are numbered R01 through R20. Thus, the main file name for the sixth Quarterly Technical Progress Report under Award No. DE would be 12345R06.PDF. If monthly, quarterly, annual, and a final technical report are required, the numbers

would run from R01 through R86 (60 monthly reports, 20 quarterly reports, 5 annual reports, and 1 final report).

J.17 PROPERTY REPORTS (MAR 1999)

The FETC Property Handbook entitled "Management of Government Property in the Possession of Contractors," contains forms, instructions, and suggested formats for submission of property reports. This handbook can be found at <http://www.fetc.doe.gov/business/index.html>.

J.18 REPORT OF CONTRACTOR'S PROPERTY MANAGEMENT SYSTEM (MAR 1999)

This report shall consist of the Contractor's comprehensive written property management system and is due within 6 months of the contract award date. It shall address the Contractor's written system for controlling, protecting, preserving and maintaining all Government property. The report format shall be consistent with Contractor's system and shall as a minimum enable comprehensive evaluation by the Government. (If not provided in your local format, see sample in the FETC Property Handbook).

J.19 ANNUAL REPORT OF PROPERTY IN THE CUSTODY OF CONTRACTORS (FETC F 580.1-8) (MAR 1999)

This report includes **ALL** government-owned, purchased and furnished property and materials for which the contractor is accountable to the Government. This report shall also include Government Property at subcontractor's plants and alternate locations. This report is submitted on FETC F 580.1-8 for the period ending September 30 and is due by October 15.

J.20 HIGH RISK PROPERTY REPORT (FETC 4440.5) (MAR 1999)

Some property, because of its peculiar nature, its potential impact on public health and safety, on the environment, on security interests, or on proliferation concerns, must be handled, controlled, cleared and disposed of in other than the standard manner. High-risk property includes property which is: 1) nuclear-related; 2) proliferation-sensitive or export controlled; 3) chemically, biologically, or radiologically contaminated; 4) national security/military interests; and 5) hazardous materials and wastes. Further definitions of high-risk property can be found at <http://www.pr.doe.gov/ppl.html>. This report is required by the DOE for the control (acquisition, management and disposal) of high risk property to ensure that such disposition does not adversely affect public safety and/or the environment, national security, or nuclear nonproliferation objectives of the United States. This report shall be submitted for the period ending September 30 and is due by October 15 of each year.

J.21 REPORT OF PHYSICAL INVENTORY OF CAPITAL EQUIPMENT (MAR 1999)

Capital equipment is any piece of personal property, equipment, or furniture with a useful service life of 2 years or more and is acquired at a unit cost of \$25,000 or more. The suggested format for this report can be found in the FETC Property Handbook at <http://www.fetc.doe.gov/business/index.html>. This report is due 2 years from award date and every 2 years thereafter.

J.22 REPORT OF PHYSICAL INVENTORY OF SENSITIVE ITEMS (MAR 1999)

Sensitive items are identified as small calculators, tape recorders, radios, photographic and projection equipment, typewriters and other office machines, firearms, survey instruments, binoculars, power tools, personal computers, printers, external modems, or other equipment, which because of its general use characteristics and ease of transport are particularly susceptible to misappropriation or theft. These items will usually have an acquisition cost of less than \$25,000. The suggested format for this report can be found in the FETC Property Handbook at <http://www.fetc.doe.gov/business/index.html>. The report is to be submitted one year from the date of award and yearly thereafter.

J.23 REPORT OF TERMINATION OR COMPLETION INVENTORY (SF-1428 AND SF-120) (MAR 1999)

This report submitted on the SF-1428 and SF-120 is due immediately upon completion or termination of the contract. The contractor is required to perform and cause each subcontractor to perform a physical inventory, adequate for disposal purposes, of all Government property applicable to the contract.

STANDARD CLAUSES

The following set of standard clauses (DOE Set 304) will be included in resultant contracts. It is provided to familiarize potential Offerors with standard DOE requirements. Please notice that many of the clauses are self deleting, depending on the type of organization involved.

These clauses do not constitute an entire contract. Other articles, forms, and special clauses will also be included in any resultant contract.

SECTION I - CONTRACT CLAUSES

I.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE. (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://farsite.hill.af.mil/vffar1.htm> or <http://www.arnet.gov/far/index.htm>

I.2 52.202-1	DEFINITIONS. OCT 1995
I.3 952.202-1	DEFINITIONS.
I.4 52.203-3	GRATUITIES. APR 1984
I.5 52.203-5	COVENANT AGAINST CONTINGENT FEES. APR 1984
I.6 52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT. JUL 1995
I.7 52.203-7	ANTI-KICKBACK PROCEDURES. JUL 1995
I.8 52.203-8	CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY. JAN 1997
I.9 52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY. JAN 1997
I.10 52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS. JUN 1997
I.11 52.204-4	PRINTING/COPYING DOUBLE-SIDED ON RECYCLED PAPER. JUN 1996
I.12 952.208-70	PRINTING. APR 1984
I.13 52.209-6	PROTECTING THE GOVERNMENTS INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT. JUL 1995
I.14 52.215-2	AUDIT AND RECORDS - NEGOTIATION. AUG 1996
I.15 52.215-2	AUDIT AND RECORDS - NEGOTIATION. (AUG 1996) -- ALTERNATE II APR 1998
I.16 52.215-8	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT. OCT 1997
I.17 52.215-10	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA. OCT 1997
I.18 52.215-12	SUBCONTRACTOR COST OR PRICING DATA. OCT 1997
I.19 52.215-14	INTEGRITY OF UNIT PRICES. OCT 1997
I.20 52.215-15	PENSION ADJUSTMENTS AND ASSET REVERSIONS. DEC 1998
I.21 52.215-16	FACILITIES CAPITAL COST OF MONEY. OCT 1997
I.22 52.215-17	WAIVER OF FACILITIES CAPITAL COST OF MONEY. OCT 1997
I.23 52.215-18	REVERSION OR ADJUSTMENT OF PLANS FOR POST RETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS. OCT 1997
I.24 52.215-19	NOTIFICATION OF OWNERSHIP CHANGES. OCT 1997

I.25 52.215-21	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS. OCT 1997
I.26 52.215-21	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS. (OCT 1997) -- ALTERNATE I. OCT 1997
I.27 52.216-7	ALLOWABLE COST AND PAYMENT. APR 1998
I.28 952.216-7	ALLOWABLE COST AND PAYMENT.
I.29 52.216-11	COST CONTRACT - NO FEE. APR 1984
I.30 52.216-11	COST CONTRACT - NO FEE. (APR 1984) -- ALTERNATE I. APR 1984
I.31 52.216-12	COST-SHARING CONTRACT - NO FEE. APR 1984
I.32 52.216-12	COST-SHARING CONTRACT - NO FEE. (APR 1984) -- ALTERNATE I. APR 1984
I.33 52.216-15	PREDETERMINED INDIRECT COST RATES. APR 1998
I.34 52.219-4	NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS. JAN 1999
I.35 52.219-7	NOTICE OF PARTIAL SMALL BUSINESS SET-ASIDE. JUL 1996
I.36 52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS. JAN 1999
I.37 52.219-9	SMALL BUSINESS SUBCONTRACTING PLAN. JAN 1999
I.38 52.219-14	LIMITATIONS ON SUBCONTRACTING. DEC 1996
I.39 52.219-16	LIQUIDATED DAMAGES - SUBCONTRACTING PLAN. JAN 1999
I.40 52.222-1	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES. FEB 1997
I.41 52.222-2	PAYMENT FOR OVERTIME PREMIUMS. JUL 1990
I.42 52.222-3	CONVICT LABOR. AUG 1996
I.43 52.222-26	EQUAL OPPORTUNITY. FEB 1999
I.44 52.222-35	AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA. APR 1998
I.45 52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES. JUN 1998
I.46 52.222-37	EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA. JAN 1999
I.47 52.223-2	CLEAN AIR AND WATER. APR 1984
I.48 52.223-6	DRUG-FREE WORKPLACE. JAN 1997
I.49 52.223-14	TOXIC CHEMICAL RELEASE REPORTING. OCT 1996
I.50 952.224-70	PAPERWORK REDUCTION ACT. APR 1994
I.51 52.225-11	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES. AUG 1998
I.52 952.226-71	UTILIZATION OF ENERGY POLICY ACT TARGET ENTITIES. JUN 1996
I.53 952.226-72	ENERGY POLICY ACT SUBCONTRACTING GOALS AND REPORTING REQUIREMENTS. JUN 1996
I.54 952.226	DISPLACED EMPLOYEE HIRING PREFERENCE. (JUN 1997)
I.55 52.227-1	AUTHORIZATION AND CONSENT. (JUL 1995) -- ALTERNATE I APR 1984
I.56 52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT. AUG 996
I.57 952.227-11	PATENT RIGHTS - RETENTION BY THE CONTRACTOR (SHORT FORM). MAR 1995
I.58 952.227-13	PATENT RIGHTS - ACQUISITION BY THE GOVERNMENT. SEP 1997
I.59 FAR 52.227-14	RIGHTS IN DATA (JUN 1987) WITH ALTERNATE V (JUN 1987) AS AMENDED BY DEAR 927.409. JAN 1999
I.60 52.227-16	ADDITIONAL DATA REQUIREMENTS. JUN 1987
I.61 52.227-23	RIGHTS TO PROPOSAL DATA (TECHNICAL). JUN 1987
I.63 52.228-7	INSURANCE - LIABILITY TO THIRD PERSONS. MAR 1996
I.64 52.230-2	COST ACCOUNTING STANDARDS. APR 1998
I.65 52.230-3	DISCLOSURE AND CONSISTENCY OF COST ACCOUNTING PRACTICES. APR 1998

I.66 52.230-5	COST ACCOUNTING STANDARDS - EDUCATIONAL INSTITUTION. APR 1998
I.67 52.230-6	ADMINISTRATION OF COST ACCOUNTING STANDARDS. APR 1996
I.68 52.232-17	INTEREST. JUN 1996
I.69 52.232-20	LIMITATION OF COST. APR 1984
I.70 52.232-22	LIMITATION OF FUNDS. APR 1984
I.71 52.232-23	ASSIGNMENT OF CLAIMS. JAN 1986
I.72 52.232-25	PROMPT PAYMENT. JUN 1997
I.73 52.232-33	MANDATORY INFORMATION FOR ELECTRONIC FUNDS TRANSFER PAYMENT. AUG 1996
I.74 52.233-1	DISPUTES. (OCT 1995) -- ALTERNATE I DEC 1991
I.75 52.233-3	PROTEST AFTER AWARD. (AUG 1996) -- ALTERNATE I JUN 1985
I.76 952.235-70	KEY PERSONNEL. APR 1994
I.77 52.242-1	NOTICE OF INTENT TO DISALLOW COSTS. APR 1984
I.78 52.242-3	PENALTIES FOR UNALLOWABLE COSTS. OCT 1995
I.79 52.242-4	CERTIFICATION OF FINAL INDIRECT COSTS. JAN 1997
I.80 52.242-13	BANKRUPTCY. JUL 1995
I.81 52.243-2	CHANGES - COST-REIMBURSEMENT. (AUG 1987) -- ALTERNATE I. APR 1984
I.82 52.243-2	CHANGES - COST-REIMBURSEMENT. (AUG 1987) -- ALTERNATE V. APR 1984
I.83 52.244-2	SUBCONTRACTS. AUG 1998
I.84 52.244-2	SUBCONTRACTS. (AUG 1998) -- ALTERNATE II AUG 1998
I.85 52.244-5	COMPETITION IN SUBCONTRACTING. DEC 1996
I.86 52.244-6	SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS. OCT 1998
I.87 52.245-5	GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS). JAN 1986
I.88 52.245-5	GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS). (JAN 1986) -- ALTERNATE I. JUL 1985
I.89 952.245-5	GOVERNMENT PROPERTY COST REIMBURSEMENT, TIME-AND-MATERIALS, OR LABOR-HOUR CONTRACTS.
I.90 52.246-25	LIMITATION OF LIABILITY--SERVICES. FEB 1997
I.91 952.247-70	FOREIGN TRAVEL. FEB 1997
I.92 52.249-5	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (EDUCATIONAL AND OTHER NONPROFIT INSTITUTIONS). SEP 1996
I.93 52.249-6	TERMINATION (COST-REIMBURSEMENT). SEP 1996
I.94 952.251-70	CONTRACTOR EMPLOYEE TRAVEL DISCOUNTS. JUN 1995
I.95 52.253-1	COMPUTER GENERATED FORMS. JAN 1991